

CLAIMS:

1. An *in vitro* method for observing an effect of a test agent on a murine tumour model, comprising the steps of:

5 a) providing at least one synthetic murine living tissue model comprising a three-dimensional array of murine fibroblasts in a collagen gel and at least one murine test cell, wherein the test cell is a model of benign or malignant tumour tissue;

10 b) contacting the test agent with said model(s); and

c) observing the effect the test agent has on said test cell.

15 2. A method according to claim 1 wherein the test cell is supported on a surface of the array.

3. A method according to claim 2 wherein a plurality of test cells form a layer supported on a surface of the array.

20 4. A method according to claim 1 wherein the test cell is located within the array.

25 5. A method according to any one of claims 1 to 4 wherein the fibroblasts and test cells are derived from the same tissue type.

6. A method according to any one of claims 1 to 5 wherein the test cell is an epithelial cell.

30 7. A method according to claim 6 wherein the test cell is from skin, mammary, lung, or intestinal epithelium.

35 8. A method according to any one of claims 1 to 7 wherein the model comprises more than one type of test cell.

9. A method according to claim 8 wherein the model comprises a normal test cell and a benign and/or malignant tumour test cell.

5 10. A method according to any one of the preceding claims wherein the test cell is labelled.

10 11. A method according to any one of the preceding claims wherein the test agent is a chemical agent, pharmaceutical, peptide, protein or nucleic acid or radiation.

12. A method according to any one of claims 1 to 10 wherein the test agent is a delivery vehicle for a therapeutic agent.

15 13. A method according to any one of the preceding claims further comprising observing the effect of the test agent on test cells which are a model of normal tissue.

20 13. A method according to any one of the preceding claims comprising determining the effect of the test agent on test cell number, area, volume, shape, morphology, marker expression or chromosomal fragmentation.

25 14. A method according to any one of the preceding claims further comprising the step of selecting an agent which has a desired effect on the test cell.